What is claimed is:

1. A method of reducing affects of linear birefringence in an optical fiber, comprising:

(a) subdividing a length of the optical fiber into a plurality of sections, and;

(b) introducing between the sections a twist having a predetermined sense of rotation and a twist angle.

2. The method of claim 1, further comprising reversing the sense of rotation of the twist between sections after an accumulated twist for previously introduced twists between sections is substantially equal to 90°.

3. The method of claim 2, wherein the twist angle between adjacent sections is substantially 90°.

4. The method of claim 2, wherein the twist angle between adjacent sections is less than 90°.

5. The method of claim 2, wherein the twist angle between adjacent sections is greater than 90°.

6. The method of claim 1, wherein a fiber orientation is maintained along the sections.

7. The method of claim 6, further comprising reversing the sense of rotation of the twist between sections after an accumulated twist for previously introduced twists between sections is substantially equal to 90°.

8. The method of claim 7, wherein the twist angle between adjacent sections is substantially 90°.

9. The method of claim 7, wherein the twist angle between adjacent sections is less than 90°.

10. The method of claim 1, wherein the twist angle between adjacent sections is less than 90°.

11. The method of claim 1, wherein the twist angle between adjacent sections is substantially equal to 90°.

12. The method of claim 1, wherein the twists are produced by heating a length of the fiber located between adjacent sections.

13. The method of claim 1, wherein a cumulative retardance along each of the sections is less than 180°.

14. An optical fiber with reduced effects of linear birefringence, comprising:

(a) a plurality of fiber sections, and;

(b) a twist located between adjacent sections.

15. The optical fiber of claim 14, wherein a sense of rotation of the twist between sections along the optical fiber is reversed after an accumulated twist for previously introduced twists between sections is substantially equal to 90°.

16. The optical fiber of claim 14, wherein a twist angle is substantially equal to 90°.

17. The optical fiber of claim 14, wherein the optical fiber is a circular-cored single-mode fiber.

18. The optical fiber of claim 14, wherein an orientation of the fiber is maintained along the sections.

19. The optical fiber of claim 18, wherein a sense of rotation of the twist between sections along the optical fiber is reversed after an accumulated twist for previously introduced twists between sections is substantially equal to 90°.

20. The optical fiber of claim 19, wherein a twist angle is substantially equal to 90°.

21. The optical fiber of claim 19, wherein a twist angle is less than 90°.